September 30, 2015

Mr. Todd Gmitro
Remediation & Reuse Branch
USEPA - #5
77 West Jackson Blvd
Chicago, IL 60604

RE: GE Aviation Building 700 Manhole & Cart Wash Area Clean-up
FILE: 10361/60800

Dear **Mr. Gmitro:**

This letter provides a background and summary of clean-up activities for four abandoned manholes and an excavated cart wash area that were discovered in mid-December 2014, during renovation activities conducted in the northeastern corner of Building 700 at the GE Aviation facility in Evendale, OH. Clean-up was performed in accordance with a work plan submitted to USEPA, dated January 15, 2015, and included as Attachment A. The locations of the manholes and cart wash excavation area are shown on the attached Figure 1.

MANHOLE BACKGROUND

Upon discovery of the manholes, GE performed records reviews in an attempt to identify the former operations that may have been connected to these manholes. In addition, historical RCRA Corrective Action documents were reviewed to identify if the manholes were associated with a former solid waste management unit (SWMU) or area of concern (AOC). The record reviews did not identify the former operations that might have been connected to these manholes and also could not confirm if these manholes were associated with a former SWMU or AOC.

The manholes were opened and found to contain residual sludge material at the base of each manhole along with several pipe penetrations. The material was subsequently tested for waste characterization purposes by GE. Results indicated that this material contained toxicity characteristic leaching procedure (TCLP) concentrations of cadmium at or above 1 mg/L indicating that the residual sludge material was hazardous. Detectable concentrations of TCLP barium and lead were also reported, although not at levels considered hazardous. Based on these results, the residual sludge materials from the four manholes were designated for management and disposal as hazardous. Based on the records review being inconclusive regarding the potential connection to a SWMU or AOC, and the analytical results identifying hazardous levels of cadmium, GE informed USEPA of their discovery and the plan for clean-up in an email to Todd Gmitro, RCRA Program Manager, on January 15, 2015. The clean-up plan included:

- Sample and characterize for disposal any material present at the base of each manhole;
- Remove and properly dispose of the material until a solid base is encountered;
- Inspect the integrity of the base of each manhole and document if cracks are observed;
- If the manholes have a concrete base, no additional samples will be collected from this area;
- Cap the pipe penetrations at the wall of each manhole;

8805 Governor's Hill, Suite 164
Cincinnati, OH 45249

p 513-697-2020
f 513-697-2040

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- Backfill with structural fill; and
- Seal the concrete floor areas to match existing.

MANHOLE CLEAN-UP ACTIVITIES

Clean Harbors, a waste management contractor, was tasked with developing a work plan to safely remove the waste, clean each manhole, plug the influent and effluent pipelines located within the manholes, and backfill the manholes to permanently seal before continuing with renovations in this area.

The cleaning of the four abandoned manholes occurred during February 19, 2015, through February 26, 2015. OBG was onsite to record activities, evaluate the integrity of the base of each manhole, track progress, and document the clean-up activities prior to permanently sealing the manholes. Clean Harbors utilized a vacuum truck, equipped with both aluminum and corrugated piping to remove the residual sludge from each manhole. The sludge was placed into a lined roll-off container that was properly labeled and designated for hazardous waste storage and disposal. A pressure washer was used to clean the sidewalls of the manholes with clean water and to flush the waste into the vacuum hose. Flooring around the manholes was covered with removable cardboard-based flooring that would be replaced in the event of a spill or leak. The cardboard-based flooring was placed by construction workers prior to any investigative or clean-up activities. Rips or tears in this flooring which occurred during work were promptly repaired to prevent contact of the waste materials with the surrounding concrete floor. Initial cleaning and vacuuming of the manholes was completed on February 19, 2015.

Once the flowable waste in each manhole had been vacuumed, a confined space permit was issued to allow a single worker to enter each manhole. Worker entry was necessary in two manholes because some residuals could not be removed with the vacuum hose. There were no indications of unacceptable atmosphere conditions in the manholes during the entries. This work was completed on February 20, 2015. Once the manholes were clean enough for visual observation of the base, OBG confirmed that the concrete floors and walls of the manholes were intact. Some surface chipping of the concrete had occurred in Manholes 1 and 4, as labeled on Figure 1, but none of the chipping had compromised the integrity of the concrete. Because the concrete was intact, sampling of underlying soil was not necessary.

Work on the manholes resumed on February 24, 2015, with plans to insert inflatable rubber Test-Ball™ plugs into the pipelines to prevent residual fluid from flowing into the manholes. Test Ball™ plugs were inserted into pipes and inflated to maximum size of the pipe to prevent fluid flow and seepage. The manholes were then vacuumed again and pressure washed to a clean environment. The equipment that came in contact with the waste residuals and seepage was properly decontaminated after use and personal protective equipment was placed into the lined roll-off container for disposal as a hazardous waste.

Manholes were then filled with flowable fill to the concrete floor surface.

CARTWASH BACKGROUND

Upon discovery of oily fluids surrounding an unknown trench drain below the cart wash area, GE performed a review of historical records in an attempt to identify the former operations that may have been connected to this cart wash. In addition, historical RCRA Corrective Action documents were reviewed to identify if the cart wash was associated with a former SWMU or AOC. The records review did not identify former operations that may have been connected to the cart wash. Historical records also did not indicate that the cart wash was associated with a former SWMU or AOC.

The oily fluid was sampled by GE and analyzed for TCLP metals, total petroleum hydrocarbons (TPH), and PCBs. Laboratory analytical results (Attachment B) indicated detectable concentrations of TPH-DRO and GRO. No PCBs were detected. Barium was the only metal detected; however, the concentrations were below USEPA

criteria for hazardous waste. As such, oily material removed from the cart wash area was designated for management and disposal as non-hazardous waste. GE also informed USEPA of their discovery and the plan for clean-up in an email to Todd Gmitro, RCRA Program Manager on January 15, 2015. The clean-up plan included:

- Sample and characterize for disposal any material present in the cart wash excavation;
- Remove and properly dispose of the material until the remaining material is devoid of free liquids;
- Collect a sample from the remaining soil at the excavated area and analyze for total petroleum hydrocarbons, diesel range organics (TPH, DRO) prior to backfilling;
- Cap the pipe penetrations at the sidewall of the cart wash excavation;
- Backfill with structural fill; and
- Seal the concrete floor areas to match existing.

CARTWASH CLEAN-UP ACTIVITIES

The work plan for the cart wash area included removing the concrete floor, removing potentially impacted fill material underlying the concrete floor, cleaning the catch basins on both ends of the trench drain, removing the trench drain, and plugging influent and effluent pipelines located within the catch basins. OBG was tasked with documenting the clean-up and removal efforts and collecting a sample from the underlying fill and/or native soil that was exposed once the visibly contaminated material had been removed.

The cleaning of the trench drain and cart wash area occurred between June 10 and 15, 2015. The Contractor first vacuumed and drummed accumulated water, then utilized a backhoe and skid steer to remove the visually impacted fill material and soils from the area. A pressure washer was used to clean the sidewalls of the catch basins once the soil and concrete material was removed.

The approximate dimensions of the cart wash collection unit was approximately 10 feet wide by 15 feet long and 3.5 feet deep. Three lined roll-off containers were filled with oily impacted soil and concrete and eight drums were filled with water removed during excavation. Proper disposal of these materials was completed following receipt of waste characterization data indicating the materials were non-hazardous.

Upon removal of the visibly stained materials, a soil sample was collected from the unstained soil at the base of the excavation, and analyzed for TPH – Gasoline-range Organics (GRO) and DRO in accordance with the work plan. Analytical results from this sample are attached as Attachment C. The results identified concentrations of TPH fractions remaining in the soil at the following concentrations: GRO - 12 mg/Kg; DRO - 1700 mg/Kg; and ORO (Oil-range Organics) - 1900 mg/Kg.

Prior to completing additional building renovations in this area, the excavation area was backfilled with 22 yards of flow-able fill on June 22, 2015.

CLOSING

Should you have any questions concerning this report, please feel free to contact me at (248) 505-8540.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

Scott L. Cormier. P.E.
Vice President

Attachments: Figure 1 - Manholes and Cart Wash Area
Attachment A - Clean-Up Work Plan
Attachment B - Laboratory Results -- Cart Wash Fluid Sample
Attachment C - Laboratory Results -- Cart Wash Soil Sample

cc: Ed Kolodziej, GE
Joanne Reinhold, GE
Rick Boone, OBG
Terra Dalton, OBG

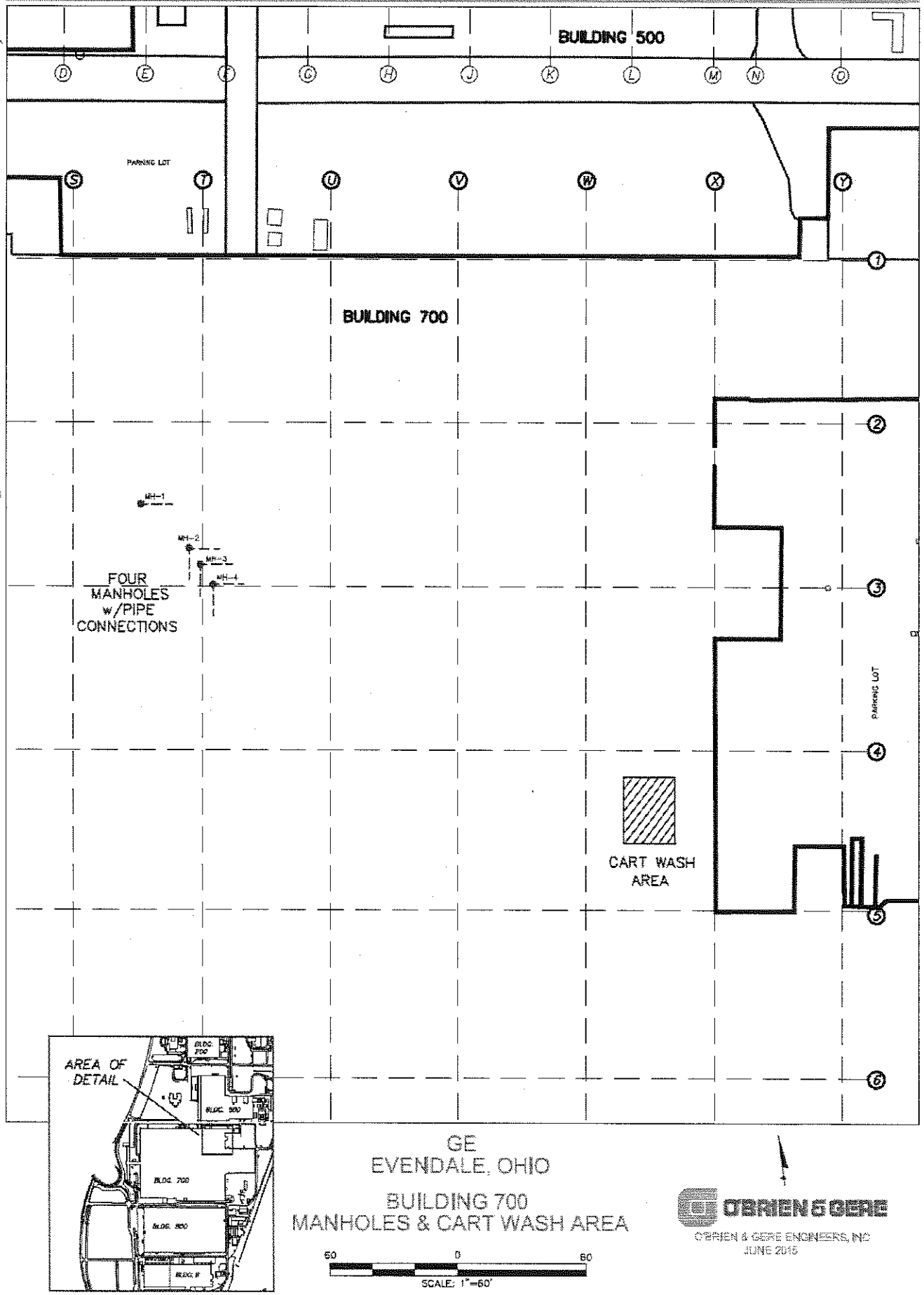
Attachments

Figure 1

Manholes and

Cart Wash Area

FIGURE 1



GE
EVENDALE, OHIO

BUILDING 700
MANHOLES & CART WASH AREA

60 0 60
SCALE: 1"=60'

O'BRIEN & GERE

O'BRIEN & GERE ENGINEERS, INC
JUNE 2015

PLOT DATE: 6/30/2015 jmo

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Attachment A

Clean-Up Work Plan

From: Scott Cormier
Sent: Thursday, January 15, 2015 12:43 PM
To: Gmitro, Todd
Cc: 'Kolodziej, Edward (GE, Corporate) (Edward.Kolodziej@ge.com)'; Joanne.Reinhold@ge.com; Rick Boone
Subject: GE Aviation, Evendale, OH: Bldg 700 CMC Project – Manholes at Column T3 and Cart Wash Area at Column W4

Todd, The GE site in Evendale, OH has an ongoing project to prepare space inside Building 700 to accommodate a Ceramic Matrix Composites (CMC) process. The CMC project will support research and development associated with the use of ceramic matrix composite materials in the design of state of the art jet engine parts. Specifically, there are four (4) manholes to be filled near column T3 and a cart wash basin and trench drain to be filled in at column W4. The locations of these two areas inside Building 700 are shown in the attached Figure 1.

The four manholes at column T3 may have been associated with one or more of the SWMUs that were included in the group of "Acid Neutralization Systems" identified in the 1989 RFA/VSI report (No. 108 and 110).

During removal of the cart wash unit on Saturday, January 3, 2015, GE encountered residual material under the concrete floor slab in Building 700 (column W4). The cart wash unit has a trench drain and collection basin that drains to an underground temporary holding tank. Fluids are then pumped into an outdoor above ground frac tank, which is regularly emptied and the liquids properly disposed. This cart wash unit might have been associated with SWMUs 59 (Ultrafiltration Concentrate Tank) and 60 (Tramp Oil Tank) which were located in the area of the frac tank.

The construction plans for these two areas include the following:

1. Sample and characterize for disposal any material present at the base of each Manhole and in the cart wash excavation
2. Remove and properly dispose of the material until a solid base is encountered (manholes) or the remaining material is devoid of free liquids (cart wash area)
3. Inspect the integrity of the base of each manhole and document if cracks are observed
4. Collect a sample from the remaining soil at the cart wash area and analyze for total petroleum hydrocarbons, diesel range organics (TPH, DRO) prior to backfilling. If the manholes have a concrete base, no additional samples will be collected from this area.
5. Cap the pipe penetrations at the wall of each manhole and/or sidewall of the cart wash excavation
6. Backfill with structural fill
7. Seal the concrete floor areas to match existing

GE collected and analyzed for disposal purposes a sample of the material present at the base of each of the four manholes and of the material in the cart wash area. The laboratory results are attached to this email. In 2 of the manhole samples, TCLP cadmium was identified at or above 1 mg/l. Leachable levels of barium and lead were also identified in the samples, but at levels below TCLP criteria. Based on the results, GE plans to manage and dispose of the material being removed from the manholes as a hazardous waste. The analytical results for the material in the cart wash area identified levels of TPH, DRO along with leachable barium at a level below TCLP criteria. The material to be removed from the cart wash area will be disposed as a non-hazardous waste.

After construction is complete, GE will provide a summary letter report to USEPA documenting the activities completed along with additional data, if generated. As referenced in the approved CMS Work Plan, GE intends

to manage soils remaining under the buildings in accordance with the soil management plan (SMP). The SMP is under development and will also be provided to USEPA once complete.

If you have any questions, please contact either Ed Kolodziej @ 610.992.7981 or me at 248.505.8540.

Thanks,

O'BRIEN & GERE
Scott L. Cormier, P.E.
VICE PRESIDENT

O'BRIEN & GERE
37000 Grand River Avenue, Suite 260
Farmington Hills, MI 48335
p 248-477-5701, ext. 13 | *f* 248-477-5962
m 248-505-8540
scott.cormier@obg.com www.obg.com

Attachment B

Laboratory Results

- Cart Wash Fluid Sample

ALS Environmental

08-Jan-2015

John Iker
Clean Harbors Environmental
4879 Spring Grove Ave.
Cincinnati, OH 45232

Tel: (513) 563-1136
Fax: (513) 243-9167

Re: 700 Cart Wash; Project No.: 1500074310 Work Order: **1501080**

Dear John,

ALS Environmental received 1 sample on 07-Jan-2015 01:47 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 14.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Chris Gibson

Chris Gibson
Project Manager

ALS Environmental

Date: 08-Jan-15

Client: Clean Harbors Environmental
Project: 700 Cart Wash; Project No.: 1500074310
Work Order: **1501080**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1501080-01	700 Cart Wash	Liquid		1/7/2015	1/7/2015 13:47	☐

Client:	Clean Harbors Environmental
Project:	700 Cart Wash; Project No.: 1500074310
Work Order:	1501080

Case Narrative

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested.

Results relate only to the items tested and are not blank corrected unless indicated.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

ALS Environmental

Date: *08-Jan-15*

Client: Clean Harbors Environmental
Project: 700 Cart Wash; Project No.: 1500074310 **Work Order:** 1501080
Sample ID: 700 Cart Wash **Lab ID:** 1501080-01
Collection Date: 1/7/2015 **Matrix:** LIQUID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS			**SW8015B**		Prep Date: **1/8/2015**	Analyst: **SAD**
TPH C10-C20	**280,000**		**67**	**mg/Kg**	50	1/8/2015
TPH C20-C34	**330,000**		**67**	**mg/Kg**	50	1/8/2015
Surr: Nonane	*75.7*		*40-80*	*%REC*	1	1/8/2015
Surr: Pentacosane	*0*	S	*70-130*	*%REC*	1	1/8/2015
GASOLINE RANGE ORGANICS (C6-C12)			**SW8015A**			Analyst: **TJH**
TPH C6-C12	ND		10	mg/Kg	5	1/8/2015 12:52 AM
Surr: Cyclooctane	*76.4*		*55-135*	*%REC*	5	1/8/2015 12:52 AM
VOLATILES BY GC-PID 8020A			**SW8020**			Analyst: **TJH**
Benzene	ND		0.025	mg/Kg	5	1/8/2015 12:52 AM
Toluene	ND		0.025	mg/Kg	5	1/8/2015 12:52 AM
Ethylbenzene	ND		0.025	mg/Kg	5	1/8/2015 12:52 AM
Xylenes, Total	**0.22**		**0.025**	**mg/Kg**	5	1/8/2015 12:52 AM
Surr: Tetrachloroethene	*103*		*81-118*	*%REC*	5	1/8/2015 12:52 AM
PCBS IN OIL			**SW8082**		Prep Date: **1/8/2015**	Analyst: **SAD**
Aroclor 1016	ND		4.3	mg/Kg	1	1/8/2015
Aroclor 1221	ND		8.6	mg/Kg	1	1/8/2015
Aroclor 1232	ND		4.3	mg/Kg	1	1/8/2015
Aroclor 1242	ND		4.3	mg/Kg	1	1/8/2015
Aroclor 1248	ND		4.3	mg/Kg	1	1/8/2015
Aroclor 1254	ND		8.6	mg/Kg	1	1/8/2015
Aroclor 1260	ND		8.6	mg/Kg	1	1/8/2015
Surr: Decachlorobiphenyl	*73.8*		*51.1-110*	*%REC*	1	1/8/2015
Surr: Tetrachloro-m-xylene	*79.2*		*16.8-130*	*%REC*	1	1/8/2015
TCLP MERCURY BY CVAA			**SW7470A**		Prep Date: **1/8/2015**	Analyst: **SLW**
Mercury	ND		0.50	µg/L	1	1/8/2015 02:34 PM
TCLP METALS BY ICP			**SW6010B**		Prep Date: **1/8/2015**	Analyst: **VAW**
Arsenic	ND		0.10	mg/L	1	1/8/2015 01:22 PM
Barium	**0.43**		**0.10**	**mg/L**	1	1/8/2015 01:22 PM
Cadmium	ND		0.10	mg/L	1	1/8/2015 01:22 PM
Chromium	ND		0.10	mg/L	1	1/8/2015 01:22 PM
Lead	ND		0.10	mg/L	1	1/8/2015 01:22 PM
Selenium	ND		0.10	mg/L	1	1/8/2015 01:22 PM
Silver	ND		0.10	mg/L	1	1/8/2015 01:22 PM

Note:

ALS Environmental

Date: *08-Jan-15*

Client: Clean Harbors Environmental
Project: 700 Cart Wash; Project No.: 1500074310
Work Order: 1501080

Analytical Comments

Method	Type:	SampID	SeqNo	Analysis	Comments
Batch 26266					
	Analysis	1501080-01B	984994	Diesel Range Organics	Surrogate could not be calculated due to high levels of hydrocarbons present within the sample.

ALS Environmental

Date: 08-Jan-15

Client: Clean Harbors Environmental

Work Order: 1501080

Project: 700 Cart Wash; Project No.: 1500074310

QC BATCH REPORT

Batch ID: **26265** Instrument ID: **GC3** Method: **SW8082**

MBLK Sample ID: **MBLK-26265-26265** Units: **mg/Kg** Analysis Date: **1/8/2015**

Client ID: Run ID: **GC3_150108A** SeqNo: **984942** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	5.0								
Aroclor 1221	ND	10								
Aroclor 1232	ND	5.0								
Aroclor 1242	ND	5.0								
Aroclor 1248	ND	5.0								
Aroclor 1254	ND	5.0								
Aroclor 1260	ND	5.0								
Surr: Decachlorobiphenyl	3.81	0	*5*	0	*76.2*	*70-130*	0			
Surr: Tetrachloro-m-xylene	4.4	0	5	0	*88*	*70-130*	0			

LCS Sample ID: **LCS-26265-26265** Units: **mg/Kg** Analysis Date: **1/8/2015**

Client ID: Run ID: **GC3_150108A** SeqNo: **984943** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1260	84.84	5.0	100	0	84.8	70-130	0			
Surr: Decachlorobiphenyl	4.11	0	*5*	0	*82.2*	*51-110*	0			
Surr: Tetrachloro-m-xylene	4.62	0	*5*	0	*92.4*	*16.8-130*	0			

LCSD Sample ID: **LCSD-26265-26265** Units: **mg/Kg** Analysis Date: **1/8/2015**

Client ID: Run ID: **GC3_150108A** SeqNo: **984944** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1260	85.12	5.0	100	0	85.1	70-130	84.84	0.329	20	
Surr: Decachlorobiphenyl	4.08	0	*5*	0	*81.6*	*51-110*	4.11	*0.733*	*20*	
Surr: Tetrachloro-m-xylene	4.51	0	5	0	*90.2*	*16.8-130*	4.62	*2.41*	*20*	

The following samples were analyzed in this batch: 1501080-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Clean Harbors Environmental
Work Order: 1501080
Project: 700 Cart Wash; Project No.: 1500074310

QC BATCH REPORT

Batch ID: **26266** Instrument ID: **GC8** Method: **SW8015B**

MBLK Sample ID: **MBLK-26266-26266** Units: **mg/Kg** Analysis Date: **1/8/2015**
Client ID: Run ID: **GC8_150108B** SeqNo: **984995** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Diesel (total)	ND	1.5								
TPH C10-C20	ND	1.5								
TPH C20-C34	ND	1.5								
Surr: Nonane	255.2	0	*500*	0	*51*	*40-80*	0			
Surr: Pentacosane	448.4	0	*500*	0	*89.7*	*70-130*	0			

LCS Sample ID: **LCS-26266-26266** Units: **mg/Kg** Analysis Date: **1/8/2015**
Client ID: Run ID: **GC8_150108B** SeqNo: **984996** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Diesel (total)	3223	1.5	5000	0	64.5	60-120	0			
Surr: Nonane	247.1	0	*500*	0	*49.4*	*40-80*	0			
Surr: Pentacosane	462.9	0	*500*	0	*92.6*	*70-130*	0			

LCSD Sample ID: **LCSD-26266-26266** Units: **mg/Kg** Analysis Date: **1/8/2015**
Client ID: Run ID: **GC8_150108B** SeqNo: **984997** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Diesel (total)	3320	1.5	5000	0	66.4	60-120	3223	2.96	20	
Surr: Nonane	248	0	*500*	0	*49.6*	*40-80*	247.1	*0.372*		
Surr: Pentacosane	463.1	0	*500*	0	*92.6*	*70-130*	462.9	*0.0432*		

The following samples were analyzed in this batch: 1501080-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Clean Harbors Environmental
Work Order: 1501080
Project: 700 Cart Wash; Project No.: 1500074310

QC BATCH REPORT

Batch ID: **R115092** Instrument ID: **GC6** Method: **SW8021**

MBLK Sample ID: **BLK-R115092** Units: **mg/Kg** Analysis Date: **1/7/2015 05:02 PM**
Client ID: Run ID: **GC6_150107A** SeqNo: **984570** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	0.0050								
Toluene	ND	0.0050								
Ethylbenzene	ND	0.0050								
Xylenes, Total	ND	0.0050								
Surr: Tetrachloroethene	0.1004	0	*0.1*	0	*100*	*81-118*	0			

LCS Sample ID: **LCS-R115092** Units: **mg/Kg** Analysis Date: **1/7/2015 06:17 PM**
Client ID: Run ID: **GC6_150107A** SeqNo: **984571** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	0.2684	0.0050	0.25	0	107	77-130	0			
Toluene	0.2766	0.0050	0.25	0	111	73-126	0			
Ethylbenzene	0.2674	0.0050	0.25	0	107	59-125	0			
Xylenes, Total	0.5703	0.0050	0.5	0	114	67-129	0			
Surr: Tetrachloroethene	0.1006	0	*0.1*	0	*101*	*81-118*	0			

MS Sample ID: **1501081-01A MS** Units: **mg/Kg** Analysis Date: **1/7/2015 07:31 PM**
Client ID: Run ID: **GC6_150107A** SeqNo: **984573** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	0.4053	0.0050	0.4	0.00087	101	51.8-146	0			
Toluene	0.4002	0.0050	0.4	0.01674	95.9	35.6-162	0			
Ethylbenzene	0.3814	0.0050	0.4	-0.00079	95.6	38.8-147	0			
Xylenes, Total	0.7898	0.0050	0.8	0.004913	98.1	27.3-165	0			
Surr: Tetrachloroethene	0.1001	0	*0.1*	0	*100*	*81-118*	0			

MSD Sample ID: **1501081-01A MSD** Units: **mg/Kg** Analysis Date: **1/7/2015 07:56 PM**
Client ID: Run ID: **GC6_150107A** SeqNo: **984574** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	0.3933	0.0050	0.4	0.00087	98.1	51.8-146	0.4053	3	20	
Toluene	0.3806	0.0050	0.4	0.01674	91	35.6-162	0.4002	5.02	20	
Ethylbenzene	0.3618	0.0050	0.4	-0.00079	90.6	38.8-147	0.3814	5.29	20	
Xylenes, Total	0.7495	0.0050	0.8	0.004913	93.1	27.3-165	0.7898	5.23	20	
Surr: Tetrachloroethene	0.1006	0	*0.1*	0	*101*	*81-118*	0.1001	*0.727*		

The following samples were analyzed in this batch: 1501080-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Clean Harbors Environmental
Work Order: 1501080
Project: 700 Cart Wash; Project No.: 1500074310

QC BATCH REPORT

Batch ID: **R115097** Instrument ID: **GC6** Method: **SW8015A**

MBLK Sample ID: **BLK-R115097** Units: **mg/Kg** Analysis Date: **1/7/2015 05:02 PM**
Client ID: Run ID: **GC6_150107B** SeqNo: **984595** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH C6-C12	ND	2.0								
Surr: Cyclooctane	103.3	0	*100*	0	*103*	*55-135*	0			

LCS Sample ID: **LCS-R115097** Units: **mg/Kg** Analysis Date: **1/7/2015 06:41 PM**
Client ID: Run ID: **GC6_150107B** SeqNo: **984596** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH C6-C12	21.11	2.0	20	0	106	69.5-120	0			
Surr: Cyclooctane	110.1	0	*100*	0	*110*	*55-135*	0			

MS Sample ID: **1501081-01A MS** Units: **mg/Kg** Analysis Date: **1/7/2015 08:20 PM**
Client ID: Run ID: **GC6_150107B** SeqNo: **984598** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH C6-C12	16.76	2.0	20	0.13	83.2	22.5-117	0			
Surr: Cyclooctane	102.1	0	*100*	0	*102*	*55-135*	0			

MSD Sample ID: **1501081-01A MSD** Units: **mg/Kg** Analysis Date: **1/7/2015 08:45 PM**
Client ID: Run ID: **GC6_150107B** SeqNo: **984599** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH C6-C12	15.84	2.0	20	0.13	78.6	22.5-117	16.76	5.64	15.7	
Surr: Cyclooctane	102.8	0	*100*	0	*103*	*55-135*	102.1	*0.703*		

The following samples were analyzed in this batch: 1501080-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Clean Harbors Environmental
Work Order: 1501080
Project: 700 Cart Wash; Project No.: 1500074310

QC BATCH REPORT

Batch ID: **26286** Instrument ID: **HG1** Method: **SW7470A**

MBLK Sample ID: **MBLK-26286-26286** Units: µg/L Analysis Date: **1/8/2015 02:32 PM**
Client ID: Run ID: **HG1_150108B** SeqNo: **984937** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.50								

LCS Sample ID: **LCS-26286-26286** Units: µg/L Analysis Date: **1/8/2015 02:28 PM**
Client ID: Run ID: **HG1_150108B** SeqNo: **984935** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.14	0.50	5	0	103	80-120	0			

LCSD Sample ID: **LCSD-26286-26286** Units: µg/L Analysis Date: **1/8/2015 02:30 PM**
Client ID: Run ID: **HG1_150108B** SeqNo: **984936** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.07	0.50	5	0	101	80-120	5.14	1.37	20	

MS Sample ID: **1501080-01B MS** Units: µg/L Analysis Date: **1/8/2015 02:36 PM**
Client ID: **700 Cart Wash** Run ID: **HG1_150108B** SeqNo: **984939** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	2.52	0.50	5	0	50.4	75-125	0			S

MSD Sample ID: **1501080-01B MSD** Units: µg/L Analysis Date: **1/8/2015 02:38 PM**
Client ID: **700 Cart Wash** Run ID: **HG1_150108B** SeqNo: **984940** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	2.29	0.50	5	0	45.8	75-125	2.52	9.56	20	S

The following samples were analyzed in this batch: 1501080-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Clean Harbors Environmental
Work Order: 1501080
Project: 700 Cart Wash; Project No.: 1500074310

QC BATCH REPORT

Batch ID: **26283** Instrument ID: **ICP3** Method: **SW6010B**

MBLK Sample ID: **mblk-26283-26283** Units: **mg/L** Analysis Date: **1/8/2015 01:08 PM**
Client ID: Run ID: **ICP3_150108A** SeqNo: **984857** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.10								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.10								
Lead	ND	0.10								
Selenium	ND	0.10								
Silver	ND	0.10								

LCS Sample ID: **lcs-26283-26283** Units: **mg/L** Analysis Date: **1/8/2015 01:17 PM**
Client ID: Run ID: **ICP3_150108A** SeqNo: **984858** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.31	0.10	5	0	106	80-120	0			
Barium	4.943	0.10	5	0	98.9	80-120	0			
Cadmium	5.12	0.10	5	0	102	80-120	0			
Chromium	5.105	0.10	5	0	102	80-120	0			
Lead	5.03	0.10	5	0	101	80-120	0			
Selenium	5.6	0.10	5	0	112	80-120	0			
Silver	5.04	0.10	5	0	101	80-120	0			

LCSD Sample ID: **lcsd-26283-26283** Units: **mg/L** Analysis Date: **1/8/2015 01:19 PM**
Client ID: Run ID: **ICP3_150108A** SeqNo: **984859** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.325	0.10	5	0	106	80-120	5.31	0.282	20	
Barium	4.954	0.10	5	0	99.1	80-120	4.943	0.212	20	
Cadmium	5.145	0.10	5	0	103	80-120	5.12	0.487	20	
Chromium	5.16	0.10	5	0	103	80-120	5.105	1.07	20	
Lead	5.055	0.10	5	0	101	80-120	5.03	0.496	20	
Selenium	5.64	0.10	5	0	113	80-120	5.6	0.712	20	
Silver	5.07	0.10	5	0	101	80-120	5.04	0.593	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Clean Harbors Environmental
Work Order: 1501080
Project: 700 Cart Wash; Project No.: 1500074310

QC BATCH REPORT

Batch ID: **26283** Instrument ID: **ICP3** Method: **SW6010B**

MS Sample ID: **1501080-01B MS** Units: **mg/L** Analysis Date: **1/8/2015 01:25 PM**
Client ID: **700 Cart Wash** Run ID: **ICP3_150108A** SeqNo: **984861** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.495	0.10	5	0.0321	109	75-125	0			
Barium	5.24	0.10	5	0.4327	96.1	75-125	0			
Cadmium	5.25	0.10	5	-0.000135	105	75-125	0			
Chromium	5.105	0.10	5	0.0862	100	75-125	0			
Lead	5.06	0.10	5	0.02268	101	75-125	0			
Selenium	5.47	0.10	5	0.00395	109	75-125	0			
Silver	4.741	0.10	5	-0.00312	94.9	75-125	0			

MSD Sample ID: **1501080-01B MSD** Units: **mg/L** Analysis Date: **1/8/2015 01:28 PM**
Client ID: **700 Cart Wash** Run ID: **ICP3_150108A** SeqNo: **984862** Prep Date: **1/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.445	0.10	5	0.0321	108	75-125	5.495	0.914	20	
Barium	5.215	0.10	5	0.4327	95.6	75-125	5.24	0.478	20	
Cadmium	5.215	0.10	5	-0.000135	104	75-125	5.25	0.669	20	
Chromium	5.12	0.10	5	0.0862	101	75-125	5.105	0.293	20	
Lead	5.03	0.10	5	0.02268	100	75-125	5.06	0.595	20	
Selenium	5.42	0.10	5	0.00395	108	75-125	5.47	0.918	20	
Silver	4.752	0.10	5	-0.00312	95.1	75-125	4.741	0.232	20	

The following samples were analyzed in this batch: 1501080-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Clean Harbors Environmental
Project: 700 Cart Wash: Project No.: 1500074310
WorkOrder: 1501080

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
µg/L	
mg/Kg	
mg/L	

ALS Environmental

Sample Receipt Checklist

Client Name: CLEANHARBORS-CINCINNATI Date/Time Received: 07-Jan-15 13:47

Work Order: 1501080 Received by: SNH

Checklist completed by: Shiloh Greenwald (eSignature) 07-Jan-15 (Date) Reviewed by: Chris Gibson (eSignature) 07-Jan-15 (Date)

Matrices:

Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Attachment C

Laboratory Results

- Cart Wash Soil Sample

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-82224-1
Client Project/Site: Cart Wash Abatement

For:
O'Brien & Gere Inc of North America
8805 Governor's Hill Dr.
Ste. 164
Cincinnati, Ohio 45249

Attn: Chase Forman

Authorized for release by:
6/23/2015 7:06:54 PM
Rebecca Jones, Project Management Assistant I
rebecca.jones@testamericainc.com

Designee for

John Schove, Project Manager II
(716)504-9838
john.schove@testamericainc.com

Table of Contents

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: O'Brien & Gere Inc of North America
Project/Site: Cart Wash Abatement

TestAmerica Job ID: 480-82224-1

Job ID: 480-82224-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-82224-1

Comments
No additional comments.

Receipt
The sample was received on 6/13/2015 9:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC VOA
Method(s) 8015D: Reported analyte concentrations in the following sample are below 200 ug/kg and may be biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications: S-01-061215 (480-82224-1), (480-82224-A-1-D MS) and (480-82224-A-1-E MSD).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8015D: The following sample was diluted due to an abundance of target analytes: S-01-061215 (480-82224-1). As such, surrogate recoveries are estimated and not representative, and elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: O'Brien & Gere Inc of North America
Project/Site: Cart Wash Abatement

TestAmerica Job ID: 480-82224-1

Client Sample ID: S-01-061215

Lab Sample ID: 480-82224-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO (C6-C10)	12		1.4	0.36	mg/Kg	1	☼	8015D	Total/NA
Diesel Range Organics (C10-C20)	1700		730	220	mg/Kg	40	☼	8015D	Total/NA
Oil Range Organics (C20-C34)	1900		730	220	mg/Kg	40	☼	8015D	Total/NA

5

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: O'Brien & Gere Inc of North America
Project/Site: Cart Wash Abatement

TestAmerica Job ID: 480-82224-1

Client Sample ID: S-01-061215
Date Collected: 06/12/15 14:00
Date Received: 06/13/15 09:00

Lab Sample ID: 480-82224-1
Matrix: Solid
Percent Solids: 90.9

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	12		1.4	0.36	mg/Kg	☼	06/18/15 08:42	06/18/15 12:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*71*		*46 - 156*	*06/18/15 08:42*	*06/18/15 12:32*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C20)	1700		730	220	mg/Kg	☼	06/17/15 14:33	06/19/15 14:41	40
Oil Range Organics (C20-C34)	1900		730	220	mg/Kg	☼	06/17/15 14:33	06/19/15 14:41	40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*265*	*X*	*48 - 125*	*06/17/15 14:33*	*06/19/15 14:41*	*40*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91		0.10	0.10	%			06/13/15 16:02	1

Surrogate Summary

Client: O'Brien & Gere Inc of North America
Project/Site: Cart Wash Abatement

TestAmerica Job ID: 480-82224-1

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits) TFT2 (46-156)
480-82224-1	S-01-061215	71
480-82224-1 MS	S-01-061215	76
480-82224-1 MSD	S-01-061215	81
LCS 480-248754/2-A	Lab Control Sample	77
MB 480-248754/1-A	Method Blank	78

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015D - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits) OTPH (48-125)
480-82224-1	S-01-061215	265 X
LCS 480-248612/2-A	Lab Control Sample	84
LCSD 480-248612/3-A	Lab Control Sample Dup	84
MB 480-248612/1-A	Method Blank	69

Surrogate Legend

OTPH = o-Terphenyl

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 480-248754/1-A
Matrix: Solid
Analysis Batch: 248740

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248754

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	ND		1.2	0.33	mg/Kg		06/18/15 08:42	06/18/15 10:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*78*		*46 - 156*	*06/18/15 08:42*	*06/18/15 10:52*	*1*

Lab Sample ID: LCS 480-248754/2-A
Matrix: Solid
Analysis Batch: 248740

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248754

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C6-C10)	9.71	9.29		mg/Kg		96	64 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*77*		*46 - 156*

Lab Sample ID: 480-82224-1 MS
Matrix: Solid
Analysis Batch: 248740

Client Sample ID: S-01-061215
Prep Type: Total/NA
Prep Batch: 248754

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C6-C10)	12		10.6	22.0		mg/Kg	☼	99	41 - 142

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*76*		*46 - 156*

Lab Sample ID: 480-82224-1 MSD
Matrix: Solid
Analysis Batch: 248740

Client Sample ID: S-01-061215
Prep Type: Total/NA
Prep Batch: 248754

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C6-C10)	12		10.6	22.0		mg/Kg	☼	99	41 - 142	0	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*81*		*46 - 156*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 480-248612/1-A
Matrix: Solid
Analysis Batch: 248797

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C20)	ND		17	5.0	mg/Kg		06/17/15 14:33	06/18/15 18:18	1
Oil Range Organics (C20-C34)	ND		17	5.0	mg/Kg		06/17/15 14:33	06/18/15 18:18	1

Method: 8015D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 480-248612/1-A
Matrix: Solid
Analysis Batch: 248797

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248612

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	69		48 - 125	06/17/15 14:33	06/18/15 18:18	1

Lab Sample ID: LCS 480-248612/2-A
Matrix: Solid
Analysis Batch: 248797

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248612

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	84		48 - 125

Lab Sample ID: LCSD 480-248612/3-A
Matrix: Solid
Analysis Batch: 248797

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 248612

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	84		48 - 125

GC VOA

Analysis Batch: 248740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82224-1	S-01-061215	Total/NA	Solid	8015D	248754
480-82224-1 MS	S-01-061215	Total/NA	Solid	8015D	248754
480-82224-1 MSD	S-01-061215	Total/NA	Solid	8015D	248754
LCS 480-248754/2-A	Lab Control Sample	Total/NA	Solid	8015D	248754
MB 480-248754/1-A	Method Blank	Total/NA	Solid	8015D	248754

Prep Batch: 248754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82224-1	S-01-061215	Total/NA	Solid	5035	
480-82224-1 MS	S-01-061215	Total/NA	Solid	5035	
480-82224-1 MSD	S-01-061215	Total/NA	Solid	5035	
LCS 480-248754/2-A	Lab Control Sample	Total/NA	Solid	5035	
MB 480-248754/1-A	Method Blank	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 248612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82224-1	S-01-061215	Total/NA	Solid	3550C	
LCS 480-248612/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 480-248612/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	
MB 480-248612/1-A	Method Blank	Total/NA	Solid	3550C	

Analysis Batch: 248797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-248612/2-A	Lab Control Sample	Total/NA	Solid	8015D	248612
LCSD 480-248612/3-A	Lab Control Sample Dup	Total/NA	Solid	8015D	248612
MB 480-248612/1-A	Method Blank	Total/NA	Solid	8015D	248612

Analysis Batch: 249047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82224-1	S-01-061215	Total/NA	Solid	8015D	248612

General Chemistry

Analysis Batch: 247931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82224-1	S-01-061215	Total/NA	Solid	Moisture	

Lab Chronicle

Client: O'Brien & Gere Inc of North America
Project/Site: Cart Wash Abatement

TestAmerica Job ID: 480-82224-1

Client Sample ID: S-01-061215

Date Collected: 06/12/15 14:00
Date Received: 06/13/15 09:00

Lab Sample ID: 480-82224-1

Matrix: Solid
Percent Solids: 90.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			248754	06/18/15 08:42	MRB	TAL BUF
Total/NA	Analysis	8015D		1	248740	06/18/15 12:32	MRB	TAL BUF
Total/NA	Prep	3550C			248612	06/17/15 14:33	CPH	TAL BUF
Total/NA	Analysis	8015D		40	249047	06/19/15 14:41	JMO	TAL BUF
Total/NA	Analysis	Moisture		1	247931	06/13/15 16:02	MJH	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: O'Brien & Gere Inc of North America
Project/Site: Cart Wash Abatement

TestAmerica Job ID: 480-82224-1

Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-15 *
California	State Program	9	1169CA	09-30-15
Connecticut	State Program	1	PH-0568	09-30-16
Florida	NELAP	4	E87672	06-30-15
Georgia	State Program	4	N/A	03-31-16
Georgia	State Program	4	956	03-31-16
Illinois	NELAP	5	200003	09-30-15
Iowa	State Program	7	374	03-01-17
Kansas	NELAP	7	E-10187	07-31-15 *
Kentucky (DW)	State Program	4	90029	12-31-15
Kentucky (UST)	State Program	4	30	03-31-16
Kentucky (WW)	State Program	4	90029	12-31-15
Louisiana	NELAP	6	02031	06-30-15 *
Maine	State Program	1	NY00044	12-04-16
Maryland	State Program	3	294	03-31-16
Massachusetts	State Program	1	M-NY044	06-30-15
Michigan	State Program	5	9937	03-31-16
Minnesota	NELAP	5	036-999-337	12-31-15
New Hampshire	NELAP	1	2337	11-17-15
New Jersey	NELAP	2	NY455	06-30-15
New York	NELAP	2	10026	03-31-16
North Dakota	State Program	8	R-176	03-31-16
Oklahoma	State Program	6	9421	08-31-15 *
Oregon	NELAP	10	NY200003	06-09-16
Pennsylvania	NELAP	3	68-00281	07-31-15 *
Rhode Island	State Program	1	LAO00328	12-30-15
Tennessee	State Program	4	TN02970	03-31-16
Texas	NELAP	6	T104704412-11-2	07-31-15 *
USDA	Federal		P330-11-00386	11-26-17
Virginia	NELAP	3	460185	09-14-15 *
Washington	State Program	10	C784	02-10-16
West Virginia DEP	State Program	3	252	09-30-15
Wisconsin	State Program	5	998310390	08-31-15 *

* Certification renewal pending - certification considered valid.

Method Summary

Client: O'Brien & Gere Inc of North America
Project/Site: Cart Wash Abatement

TestAmerica Job ID: 480-82224-1

Method	Method Description	Protocol	Laboratory
8015D	Gasoline Range Organics (GRO) (GC)	SW846	TAL BUF
8015D	Diesel Range Organics (DRO) (GC)	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: O'Brien & Gere Inc of North America
Project/Site: Cart Wash Abatement

TestAmerica Job ID: 480-82224-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-82224-1	S-01-061215	Solid	06/12/15 14:00	06/13/15 09:00

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TestAmerica Cincinnati
11416 Reading Road
Cincinnati, OH 45241
Phone: 513.733.5700 Fax:

Chain of Custody Record

083711

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Rick Boone	Site Contact: Tera Dalton	Date: 6/12/2015	COC No: 1
Company Name: O'Brien & Gere	Tel/Fax:	Lab Contact: John Schove	Carrier:	1 of 1 COCs
Address: 8805 Governor's Hill Dr. Ste 104	Analysis Turnaround Time			Sampler:
City/State/Zip: Cincinnati, OH 45249	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 513-697-2020	TAT if different from Below			Walk-in Client:
Fax:	☒ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day			Lab Sampling:
Project Name: Car Wash Abatement				Job / SDG No.:
Site: GEAE				
PO # Project #: 60800.010.130				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TPH	8015D (DRO ranges)	Sample Specific Notes:
S-01-061215	6/12/15	1400	G	Soil	1			XX		

480-82224 Chain of Custody

Cincinnati

210501

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for: Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd:	Corr'd:	Therm ID No.:

	Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
1		O'Brien & Gere	6/12/15 1755		TestAm	6/13/15 1455
2		TestAm	6/12/15 1455			6/13/15 0900
3				Received in Laboratory by:		

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Login Sample Receipt Checklist

Client: O'Brien & Gere Inc of North America

Job Number: 480-82224-1

Login Number: 82224
List Number: 1
Creator: Janish, Cari M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	OBG
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	